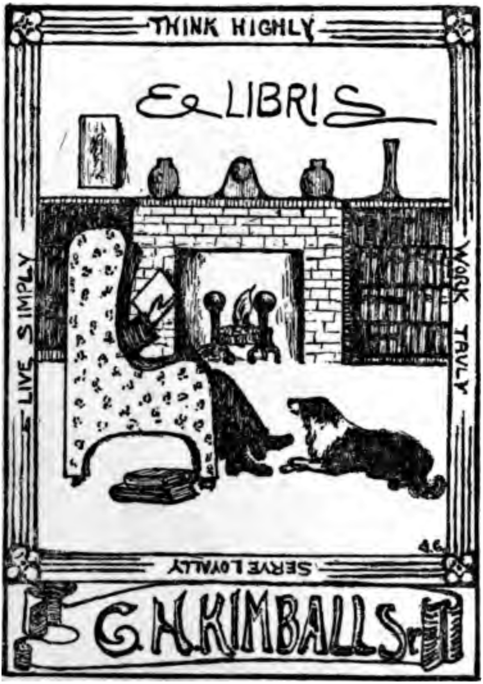
THINK HIGHLY
EX LIBRIS
LIVE SIMPLY
WORK TRULY
SERVE LOYALLY
G.H.KIMBALL Sr.

ECONOMICS
FOR EXECUTIVES

A SERIES OF TWENTY-FOUR READING TEXTS WHICH CONSTITUTE AN INTERPRETATION OF THE UNDERLYING PRINCIPLES OF ECONOMICS AND BUSINESS FOR MEN AND WOMEN IN PRACTICAL LIFE

EDITED BY

GEORGE E.van ROBERTS

AMERICAN CHAMBER OF ECONOMICS
INCORPORATED
NEW YORK

READING TEXT IX—ECONOMICS FOR EXECUTIVES

THE FINANCING OF PRODUCTION

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THE FINANCING OF PRODUCTION

I

The Significance of Finance

A COMPLETE understanding of production requires a fuller consideration of financing than we have hitherto undertaken. The most troublesome relations between the agents of production—enterprisers on the one hand and laborers, capitalists, and landlords on the other—are their financial relations. The relations of producers and consumers are also primarily financial. No understanding of production, therefore, which does not embrace a full appreciation of how it is financed, can serve as a basis for profitable business or for that cooperation among producers which economic progress so urgently requires.

The Enterpriser as Financier

The enterpriser, in particular, must have considerable financial knowledge to help him in deciding what to produce and how to produce it. A mere knowledge of the technical methods of production is not enough.

An understanding of human nature, such as good teamwork requires, is also not enough. Many a good mechanic and many a good engineer has failed in business; many a man of powerful and engaging personality has gone bankrupt through failure to understand the financial aspects of production.

Financial incompetence, furthermore, is a cause of social waste, because it commonly involves misapplication of resources, and waste of labor and materials. Not only have the investors in a defunct railroad, for instance, suffered a personal loss, but the railroad itself is an economic mistake; the community has suffered from having had labor devoted to producing a railroad which cannot be used.

The Value of Financial Knowledge

Financial understanding, however, does more than confer a business benefit on individuals and an economic benefit on the community. A mastery of the principles of finance has a moral and intellectual value, because it helps men to make better use of their brains. It enables them to enjoy that constructive exercise of mental power which is a delight in itself, as any business man who has wrestled with a complex and difficult financial problem and brought it to successful solution, will testify. His, for the time being, may be the joy

of intellectual conquest akin to that of a scientist making a discovery in his laboratory.

The Economics of Financing

An understanding of finance must be full, systematic, and fundamental to confer power on its possessor. This does not mean that a business man need know every last financial device that is in use, or be familiar with all financial practices employed. Fresh items of information constantly come to the attention of even the ablest financiers. But all these fall naturally into place in their minds, provided the financial knowledge already possessed is properly organized. What any business man needs is a grasp of the principles of the subject, which means that he knows what the *typical* financial practices and institutions are and what they are especially designed to accomplish. It means, more especially, that he knows how each of these is related to the two essential economic functions already discussed in earlier study-units: namely, enterprise, or the willingness to assume business risks, and waiting, or the service performed by the capitalist.

We shall consequently treat the more important financial activities in such a way as to show what they actually mean, both for the individual business and for the community.

We shall attempt to bring into clear relief the economic principles involved.

We shall consider, in order, Financing an Enterprise, Financial Middlemen, and the Stock Exchange, all of which are concerned with the use of funds. But this procedure requires that we should begin with a consideration of what is really meant by the productive use of funds.

II

The Meaning of Investment

All funds employed in production are used by enterprisers, though enterprisers may borrow part of them from other agents in production, such as capitalists or even laborers. All the uses to which such funds are put, as in the payment of workmen or for the purchase of materials or stocks of merchandise, are but different varieties of a single use—investment.

What Is Investment?

Anyone who thinks of investment as meaning merely that he has devoted part of his money income to the purchase of real estate, bonds, or the like, instead of leaving it in the bank or spending it on such things as food

and clothes, has a very superficial and inadequate idea of what investment really is. The purchase of real estate, bonds, or the like, is not investment in any fundamental sense, nor is the purchaser of a bond, for instance, a real investor; the transaction amounts merely to a transfer of funds from the purchaser of the bond to the seller. To term this act "investing in a bond" is merely an imposing way of expressing the simple truth that a bond has been bought. Money is really invested in concrete things, and the real investor, as suggested above, is the enterpriser. When a railroad company uses the proceeds of a bond issue to build an addition to its tracks, the enterpriser, which is the company, and not the purchasers of the bonds, is the real investor of the funds. At the company's bidding and under its direction, a genuine investment, the railroad track, comes into existence.

Labor Invested

We must be on our guard, however, in accepting the statement that money itself is the thing that enterprisers really invest. They are commonly said to "invest money," but the statement is merely a convenient figure of speech, and one that has given rise to widespread misunderstanding of financial subjects.

The plain truth is that material resources are the things really invested; not money, but

labor and raw materials are invested in the erection of a building, for example, or in the construction of a machine. The use of funds, then, merely puts the enterpriser, who is the real investor, in position to give direction to labor and to determine in what materials and in what equipment that labor shall be invested.

The Creation of Capital

Business enterprise uses its command of funds, and consequently of labor, for two principal purposes: first, the creation of equipment, such as buildings and machinery, and second, the creation of commodities, such as stocks of finished or partly finished goods. Both these represent investments of capital; in fact, they are capital, and this capital is of two principal kinds—fixed capital, such as buildings and machinery, and circulating capital, such as the supplies and stocks of goods that are always kept on hand by producers. The difference between fixed capital and circulating capital should be clearly understood because it lies at the basis of a corresponding difference between the kinds of funds needed by enterprise.

Long-Term Financing

Both fixed capital and circulating capital are used up in the process of production, but

since fixed capital lasts a long time it must be financed by persons who will forego the use of their funds for a correspondingly long period. Thus a locomotive commonly lasts for at least ten years and cannot be expected to earn its original cost in less than about that time. Funds to be invested in locomotives, therefore, must come from people who are willing to wait at least ten years before they get their money back, unless, of course, they meanwhile transfer the obligation to others. The need for fixed capital gives rise to what is called long-term financing.

Short-Term Financing

Circulating capital, on the other hand, is promptly used up; coal does not last long under a boiler, and stocks of finished and partly finished goods do not commonly remain on hand for more than a few days, weeks, or months. Such goods reach consumers promptly and are paid for within short periods, so that funds invested in circulating capital are tied up for but short periods. Such funds may be obtained from persons who will want them in the near future, but who happen not to have use for them immediately. Short-term financing, therefore, grows out of the shortness of the economic life of circulating capital.

Short-term financing is mainly confined to

that branch of production known as trade, and is chiefly handled by resort to commercial banks. It is closely connected with the character of a country's monetary system and can be best considered in succeeding study-units which deal with money and with commercial banking. Our present concern is with those long-term financial operations which are essential to the "roundabout" process of production and to the consequent employment of fixed capital in that process.

Two Economic Functions

It is important to note here a veritable paradox: labor is the principal thing really invested, and yet the laborer is not the real investor of it. The enterpriser, who pays the laborer, is the investor, because he takes the risk, and because, with the assistance of the capitalist, he does the "waiting."

In effect, the laborer has bartered the fruit of his labor for such things as food, clothes, and shelter, that he can use immediately and without taking chances. This "fruit" will "ripen" only in the future, and then only providing the enterpriser's plans do not miscarry.

What we so conveniently call the investment of funds, therefore, is but the modern way of enabling this transaction to take place; the investor, through the use of funds, undertakes the burden of risk which it is the enter-

priser's economic function to undertake, and assumes the burden of waiting, which it is the capitalist's economic function to assume.

Risk and Waiting

This distinction between waiting and the undertaking of risk is fundamental to all financing, and yet we must recognize that in practice, the two activities are usually performed together, and are seldom altogether separated. All investors of funds take some risk, trifling though it may be in some cases, and all of them also perform to some extent the economic function of waiting. In the case of the sole proprietorship, as explained in the preceding study-unit, the risk practically all rests on the shoulders of one man, who also does all the waiting, except as he may borrow money from other people. Much the same is true of members of a partnership, although special arrangements exist by which some of the parties may assume more of the risk than do others. In the case of the corporation, however, the enterprise function and the capital function may be separated almost completely, or they may, on the other hand, be completely united, and there may also be a great variety of proportions in which the two may be combined. We shall obtain most light on the economics of financing by considering how a corporate enterprise is financed.

III
Financing an Enterprise

Common Stock

The simplest method of financing a corporate enterprise is by the sale of common stock alone. Under such circumstances the owners of common stock are the proprietors of the concern; they have entire control of the business and assume practically all risk; they are, therefore, performing the whole of the enterprise function and are consequently entitled to all the profits. They are also entitled to all the interest, since all the capital invested is theirs and they consequently must do all the waiting.

It is customary to finance highly speculative ventures, as mining corporations, oil corporations, and the like, through the issuance of common stock alone. Mining securities necessarily carry so great a degree of risk that the class of investors who accept moderate and fixed returns for the sake of security are not attracted to them. The people who will invest in mining enterprises want the chances of large gains. These are best obtained through ownership of common stock.

Industrial corporations that are closely held, and whose growth has been gradual and financed largely from earnings, frequently have no capital issues but common stock. Corporations that have long been in family hands, such as the Arlington Mills, of Lawrence and Methuen, Massachusetts, the entire capital of which ($12,000,000) is in common stock, are examples of this class. Other corporations having only common stock are the Singer Manufacturing Company ($90,000,000), the Pullman Company ($135,000,000), and the Mergenthaler Linotype Company ($12,800,000).

Preferred Stock

As soon as a corporation issues preferred stock, or bonds of some kind, in addition to its common stock, the owners of its securities begin to perform different roles. Though the risk and the waiting are still combined in the hands of every security holder, they are no longer combined in the same proportions. This is because the chief element of risk continues to rest on the holders of the common stock, while the holders of the other securities are correspondingly relieved of it.

The holders of preferred stock have a distinct advantage over the holders of common stock, so far as the element of risk is concerned. This is because dividends at a speci-

fied rate, such as 7 per cent, must be paid on all outstanding preferred stock before anything is paid on the common stock. In the event of bankruptcy or voluntary dissolution of a corporation, furthermore, the preferred stock must usually be retired in full before anything is distributed to the holders of common stock.

In such cases, therefore, the enterprise function rests more largely with the holders of the common stock, while the holders of the preferred are but little more than capitalists. Thus the holders of common stock always have voting power which carries with it the control of the enterprise, while holders of preferred stock may not have this power. The bulk of the profits, also, especially in case these are large, goes to the common stockholders, because the preferred stock is usually limited to a fixed dividend rate.

Nevertheless, the preferred stockholder does participate in the enterprise function, because he runs the risk that the corporation may not earn enough to pay dividends even on the preferred stock; the preferred stockholder has no right of foreclosure in such cases, and hence no redress, so he is not completely free from the danger of losing his interest, his principal, or both. To compensate for this risk, the rate of return promised on

preferred stock exceeds as a rule that carried by high-grade bonds.

Why Issue Preferred Stock?

The issuance of preferred stock is considered to be of advantage to the holders of common when the latter have high confidence in an enterprise. They believe that it can earn enough money to provide for the dividends on the preferred stock at the rate promised and still leave available for the common stock earnings in excess of this rate.

Thus the promoters of a concern needing $100,000 may feel very sure that the prospective earnings will be perhaps $20,000 per year, or 20 per cent. If they happen to have $50,000 of their own, they will evidently be better off by raising the other $50,000 by the sale of 8 per cent preferred stock than by the sale of a like amount of common stock. For, in the first case, they will have left of this $20,000, after paying the $4,000 in dividends on the preferred, a total of $16,000 for their own, or a return of 32 per cent; whereas, if they had sold $50,000 worth of common stock, the owners of the latter would have shared equally in the earnings and no one would have received more than 20 per cent. On the other hand, of course, if the expectations of the promoters are not reached and the earnings total only $5,000, for example,

then payment of the preferred dividend will leave but $1,000 for the common stockholders. This amount affords them but 2 per cent on their investment.

"Participating Stock"

Preferred stock may have rights beyond the stated dividend. It sometimes has the further privilege of sharing in earnings with the common after the common has received a certain dividend. Stock that has this right is known as "participating" stock.

The fact that different investors take different views concerning the prospects of an enterprise explains in large part why some see an advantage in owning common stock, while others see an advantage in owning preferred. By issuing both kinds of stock, corporations enlist both these classes of investors, and thus bring into the service of society both more waiting and more enterprise.

"Owned Funds and Borrowed Funds"

The funds raised by a corporation through the sale of stock are often referred to by the business world as *owned funds,* while those raised by the sale of bonds are called *borrowed funds.* This distinction serves no useful purpose in the study of the economics of financing, however useful it may be for

legal purposes and for convenience of reference, because "owning" is not an economic function, and neither is "borrowing" nor "lending"; waiting and assuming risk are the economic functions involved. Both the functions of waiting and assuming risk always rest with the proprietor of an enterprise or with the stockholders of a corporation, while waiting alone may be the chief service of the "lender" of funds, as the bondholder. The enterpriser or stockholder usually takes the greater risk and expects a correspondingly greater compensation. The amount of money that he himself has at stake is not increased by borrowing but the amount of risk to which he is subjected is increased.

This point is often overlooked, with the result that a curious state of confusion has developed about the profits that are made upon borrowed money. The big meat-packing companies, for example, always have been large borrowers, both upon mortgages secured by their properties and at banks upon their simple promissory notes. The marketable character of their products has given them good credit.

These heavy borrowings much of the time have been at rates below normal dividend rates and the enlarged volume of business handled by means of the borrowed capital has

played an important part in increasing the net earnings of the packing companies. The increase in their dividends resulting from this practice represents compensation for the extra risk which the companies have taken in using borrowed money, and for the additional service they have been able to render to consumers by so using it. Criticism of profits in all cases should take this fact into account, because business must normally show returns in excess of ordinary interest on the capital employed in business; otherwise, everybody would prefer to put his capital at interest and nobody would take the risks and worry of doing business.

Bondholders and Stockholders

Every stockholder is in some degree an enterpriser, but the bondholder comes very close to being a mere capitalist and not an enterpriser at all. This fact is recognized by the business world in its use of the term "interest" to describe the income of the bondholder, as contrasted with "dividends" which accrue to the stockholder. Dividends, strictly considered, are partly interest and partly profit.

The bondholder is entitled to his interest whether the corporation earns anything or not, and is given means for enforcing the payment of the interest as well as for the recov-

ery of his principal. In other words, stockholders, acting in their corporate capacity, undertake, to the extent of their own investment, to relieve the bondholders from the risk of the enterprise. The most common methods by which the parties secure this result is by use of the bond and mortgage. A mortgage conveys to the lender of funds title to the property to which it refers, subject to the provision that the borrower may redeem the title upon repayment of a stipulated sum, which is the amount borrowed. The borrower obligates or "bonds" himself to repay this sum. Since there is no way, however, by which a mortgage can transfer title to more than one person, corporations selling bonds to the general public are obliged to separate the bond from the mortgage.

The mortgage is issued in favor of a disinterested party, usually a bank or trust company, which holds it as trustee for those who lend the money. Then a bond or promise to repay is issued separately to each lender, the security for the bond becoming the claim on the property deposited with the trustee. By separating the bond and mortgage, it is possible to obtain funds from many different persons and still offer to each lender the same security. In such a case a bond is representative of fractional parts of a mortgage, while

the mortgage of course represents the property against which it is held.

Why Bonds Are Issued

Bonds are issued by corporations for the same business reason that preferred stock is issued—because the management believes the additional capital thus placed at its command will earn a return in excess of what it agrees to pay. The rate upon bonds is comparatively low, such as 6, 5, or even 4 per cent. In the case already examined, for instance, in considering the advantage of an issue of preferred stock, the holders of $50,000 of common stock might profit even more from the issuance of bonds. For the interest on $50,000 of 5 per cent bonds, or $2,500, when subtracted from earnings of $20,000, would leave the stockholders $17,500, or 35 per cent on their $50,000 investment, instead of 32 per cent, which was the rate of returns when preferred stock was issued, or 20 per cent, which was the rate when common stock alone was issued. But although bonds increase the profits of the common stockholders, their risks also are correspondingly increased, for bondholders whose interest is in default usually have the right to foreclose on an enterprise.

The issue of bonds, in addition to both common and preferred stock, amounts to

still finer subdivision of the enterprise-capital functions. It consequently serves, like the diversification of stock issues, to enlist in the service of society both more waiting and more enterprise.

Short-Term Notes

It often happens that the situation confronting a borrowing corporation may be such that it can best finance an expansion requiring more permanent capital, not by the issuance of stock or bonds, but by short-term notes. If temporary conditions are causing high rates in the bond markets, the management may think it inadvisable to involve the corporation in long-term obligations on that basis, and may meet the situation by resort to short-term notes, running for two, three, or five years. At the end of that time bonds can be issued and the proceeds used to pay off the notes. Whenever a bulge appears in interest rates, the short-term note is available as a means of tiding the borrowing corporation over the period in question. If American corporations had issued long-time bonds during the period just prior to the panic of 1907, for example, the high interest rates then prevailing would have become a long-time charge. The same conditions appeared during the recent war. Many concerns found it necessary to expand rapidly to care for increasing business, but in-

terest rates were high. Consequently, for three or four years practically the only new corporate issues coming into the market were short-term notes, issued so as to provide a possible means of side-stepping high interest rates for a long period.

Callable Bonds

Another method by which a borrowing corporation can protect itself against high interest rates for a prolonged period is by means of callable bonds. Callable bonds are usually relatively long-term bonds in connection with which the borrower has reserved the right of repayment at a certain figure before maturity. The 7½ per cent bonds of E. I. DuPont de Nemours & Co., for example, are due in 1931, but by the terms of the issue the company may pay off the issue in whole or in part upon sixty days' notice at 110 per cent prior to May 1, 1922, and at any time thereafter at a price decreasing 1 per cent every year. This arrangement gives to the DuPont Company an opportunity to pay off the bonds at any time that it can market an issue bearing a lower coupon rate. It also provides compensation to the holder in case he is called upon to accept payment before the due date and consequently is put to the trouble of reinvesting his funds. Callable bonds also are an advantage to the borrowing corporation in

that it can rid itself of interest charges if in after years it has an accumulation of funds.

Both the short-term note and the callable bond are equalizing forces on interest rates. They enable borrowing concerns to shift from high to low interest rates and the very shifting works in the direction of stabilization and equalization. The demand for long-time funds during periods of high interest rates is reduced and the demand during periods of low interest rates is increased.

The Danger of Overissue

Whether a corporation issues stock only, or whether it issues both stock and bonds, it should always guard against overissue or "overcapitalization." It should not overestimate its earning power when deciding what securities it will sell, for failure to earn enough to pay the dividends that have been promised on the stock will cause loss to the stockholders, and failure to earn enough to pay interest on the bonds is an even more serious matter. The numerous foreclosures and reorganizations in American corporation finance offer striking evidence of the danger of extravagant optimism. The ability of a corporation management to estimate its earning capacity is one of the first essentials in sound financial policy. It is particularly essential to estimate accurately the ability of the

corporation to earn the interest on its bonds *during lean years.*

The investor, on the other hand, must himself look into the same questions. He must assure himself that the prospect of earnings is a satisfactory one. A bondholder, in particular, must be extremely cautious, for if the corporation does not succeed and he is obliged to exercise his right of foreclosure he will then find himself one of the proprietors of the enterprise, with holdings that are no better than the stock, and which involve on his part attention to the business and the assumption of the very hazards which it was his purpose to avoid. In fact, the formal differences between stock and bonds can be over-emphasized, for both ultimately derive their value from the earning power of the enterprise.

The Rules of Capitalization

Both managers of corporations and investors in their securities commonly pay attention in this connection to two different rules. The first of these is that the capital issues of a new corporation should correspond with the original cost of its capital assets. This, indeed, is the theory of the law, which always assumes that stocks and bonds are issued at their face value in return for cash, or else in return for property or services at cash value.

The second rule is that the capital issues of

an old corporation, though they may in some cases exceed the original cost of the capital assets, should not usually exceed the cost of their replacement. This rule is based on the idea that most business enterprises are not free from competition, either potential or actual, and that a competitor may at any time enter the field, obtain its share of the business, and reduce the earnings. The limit of such reductions, however, unless the competitor miscalculates, is set by *his* costs, which will correspond more nearly with what it *would* cost to replace or duplicate the enterprise of the old corporation than with the latter's actual or original costs.

Law of "Single Price"

Both these requirements implicitly recognize the proposition that the aggregate value of a corporation's securities should correspond with the aggregate value of the enterprise itself. They recognize also that the value of the enterprise depends in the end more upon its earning power than upon its cost. The essential economic principle involved is the so-called law of "single price," which we shall have occasion to set forth in a later study-unit. According to this law, the same thing in the same market can have but one price or one value, because no buyer will

pay more than he must pay and no seller will take less than he can get.

As applied to a business enterprise, this principle means that whenever earnings are out of line with the cost of duplicating a business, the forces of competition will bring about a readjustment between the two. If the earnings are too low, replacements will be neglected and capital will be withdrawn, and the enterprise will eventually die altogether; but if earnings are unusually high, competition is likely to spring up, which will bring the earnings down until they are in line with costs again. The full meaning of this principle will become apparent only when we have considered the forces which determine prices, but those interested in corporation finance should never lose sight of this principle.

IV

Financial Middlemen

Although bonds, shares, and notes are sometimes sold direct to individual investors by the company wanting the money, it is usually of advantage to both parties to resort to an agency or institution which acts in an intermediate capacity. The usual agency for performing this type of service is the investment

banker. Other financial agencies to be considered in this same connection are savings banks and insurance companies. They are all financial middlemen.

Like all other middlemen, financial middlemen have had their usefulness questioned, and the suggestion is sometimes made that securities may be marketed more economically by direct dealings between the corporation and the investor. Here, as elsewhere, the middleman has developed because he supplies specialized skill and knowledge. He is trained to judge securities, make a market for them by his own purchases, and find a market by his activities and facilities as a distributor.

Investment Banking

The investment banker may be looked upon either as the agent of the seller of securities or as the agent of the buyer, but he is essentially an agent of the community.

From the corporation's angle the investment banking business amounts to the merchandising of securities. Powerful financial houses and investment banking firms buy entire issues of securities brought out by companies needing funds. These securities they dispose of to dealers in large lots; these dealers, in turn, occupy the position of jobbers and dispose of smaller lots to houses which correspond to retailers. These retailers sell

to savings banks, holders of trust funds, insurance companies, and individual investors. Some of the large houses perform the wholesale, jobbing, and retailing functions through their own organization, serving as a direct agency for bringing together the borrowing corporation, on the one hand, and the individual investor with funds to lend, on the other.

Underwriting

When an investment house agrees to purchase an issue of securities from a corporation, the action is termed *underwriting*. This term means that the investment banker guarantees the sale of the securities at a specified price in advance of their being offered to the public. If he misjudges the market and buyers cannot be found for all the securities, he himself must buy the securities at the stipulated price.

Frequently in placing small issues of securities, and always in selling large ones, several investment bankers will combine their efforts and operate what is termed a *syndicate*. An agreement is drawn up which defines the conditions under which the members are to participate in the joint effort, and one or more of the participants is appointed syndicate manager. It is the manager's duty to see that the terms of the agreement are carried out. In

some instances a large syndicate will include as members as many as 1000 active bond houses and investment banking firms.

If the experience of many corporations and municipalities which have tried direct marketing of securities is any criterion, it is to their distinct advantage to employ financial middlemen. Even the Non-Partisan League administration of North Dakota, in spite of its bitter opposition to "high finance," found it advisable to engage such services in its attempt to market certain state bonds.

Services of Investment Bankers

To a corporation issuing securities the chief advantage of employing an underwriter or investment banker lies in the guaranty of a definite price on a certain date for the whole block of securities. The corporation runs no risk of the uncertainties of the market and is not annoyed with the details of selling, a work which it is not equipped to do with maximum effectiveness. Then, too, by virtue of the investment banker's contact with the market, he is in a position to recommend the type of security which the borrowing corporation may use to best advantage—both the type that will be most favorable to the borrower's interests, and also the type that will receive the readiest acceptance on the part of investors. A banker can save his client from

issuing bonds, for instance, when a fall in the general interest rate is impending and when short-term notes may prove to be a more appropriate issue.

To the investor, the responsible investment banker affords protection against unsafe securities. He renders expert financial judgment on securities, assembling all the relevant facts, a service which probably not one investor in a thousand knows how to perform adequately for himself. The financial sagacity of investors is measured largely by the skill with which they choose the investment banker who shall serve them.

A Protection to Investors

Investment houses do not guarantee the securities they sell. One reason why they cannot do this is because the small commission or profit which they receive affords no compensation for a guaranty; another reason is because the sales are continuous and run into enormous and always increasing sums. A guaranty would be meaningless and impracticable under such circumstances. It is obvious, however, that the offering of even a few unsound issues means serious loss of prestige to the investment banker, and with it a loss of business. Because of this fact investment bankers scrutinize the securities they sell just as carefully as commercial banks scrutinize

the loans they make. A reputable bond house, from the very nature of its relations to its customers, is bound to do all it can consistently do to safeguard their interests.

One source of the investor's danger lies in the fact that corporations are sometimes organized for the purpose of making money for their promoters by the sale of the stock, rather than by developing the enterprise. The practice of raising money by selling stock to the general public lends itself readily to swindling operations, because the facts of the case are so easily misrepresented by clever and experienced salesmen. This is particularly true of companies based upon inventions or alleged deposits of minerals or oil. It is evident in such cases that at best the values cannot be definitely known, and the stock salesman's glowing representations cannot be proven to be deliberate misstatements. An enormous amount of wealth is annually filched from the public, and most of it from people of small and hard-earned incomes, by get-rich-quick schemes, presented in the form of stock companies organized to exploit new ventures.

The Investor's Danger

It is evident that even though honestly organized and managed, a new company which obtains its capital funds by selling its stock, at

a cost for selling expenses alone of 15 to 25 per cent of the amount received from stockholders, is seriously handicapped for competition with established rivals whose capital funds are all available for use in the business. The new company must have some very decided and exclusive advantages to justify its entering the field under such conditions, and, generally speaking, the fact that it resorts to this expensive method of raising capital is enough to call at least for very great care in examining its claims to confidence. Sometimes the cost of this kind of promotion is covered by selling the stock at a premium, the excess price above par being frankly devoted to organization expenses.

The high commissions paid for selling stock are usually given in the case of new undertakings, which represent no established business or well-developed organization, and where all uncertainties and risks that attend upon building up a new business must be encountered. The experienced investor usually avoids such offerings unless the possibilities for growth and profit seem to him to offset the hazards involved. He usually prefers to buy issues put out for the purpose of raising additional capital by well-known companies, having a record of successful operations and of regularly meeting all obligations, including dividends.

The Need for Protection

Regulations by law do something to protect investors, as by requiring that stocks and bonds be originally issued only for value received, either in property or services. In some states, also, the law requires that anyone who sells securities must be publicly licensed and also have the legality of his offerings certified by public authority, although public authority, of course, cannot certify to their investment value. These provisions find place in so-called "Blue Sky Laws" and these probably help to keep down the number of absolute stock-jobbing swindles. In the end, however, the most practicable safeguard of the investor is to rely on the services of a competent and trustworthy investment house.

Savings Banks

The savings bank is a type of financial middleman which renders public services similar to those of investment houses, but for a different clientele and in a different way.

The financial function of the savings bank is to bring together and make available for assistance in the work of production, idle funds that would otherwise be widely scattered, such as the savings of wage-earners and others of small incomes. People frequently think that such colossal enterprises as

the United States Steel Corporation and the Pennsylvania Railroad, are owned by the millionaires of the country. It is true that a considerable number of the stocks and bonds of the corporations are owned by the rich, but huge amounts of bonds are in the hands of savings banks, which have purchased them with funds received from thousands of small depositors.

This is a fact of great importance. Individuals, each of whose savings is small, concentrate their holdings by making deposits in savings banks. These relatively small amounts, when combined, give immense totals, as is shown by the figures for the savings banks of the United States for June 30, 1921. At that time there were in the country 1601 savings banks (both mutual and stock) with 10,737,843 depositors and $6,018,258,000 of deposits. Moreover, this does not include the very large amounts held by the savings departments of other kinds of banks. These sums, if never deposited by their owners, might have been invested in some way, but the chances are they would have been spent to meet current needs.

The Benefit to the Community

The wage-earners and others who accumulate the great sums held by the savings banks accomplish two results, both of which are

beneficial not only to themselves, but to the entire community. In the first place, savings are a resource for depositors against emergency. This tends to give them a position of independence, and to minimize the severity of industrial depressions. In the second place, the savings create an investment fund, which when used by the savings banks for the purchase of securities, finances industrial development.

Savings banks are not "warehouses for money," as superficial opinion sometimes suggests. Obviously, savings banks could not keep in their vaults the $6,000,000,000 or $7,000,000,000 of deposits which have been placed with them. Such a practice would merely lock up all the money in the country and would amount to doing on a large scale what some people do when they hoard money about their houses or bury it in secret places.

Bulk of Funds Invested

The truth is that savings banks keep enough money on hand to meet the current needs of depositors, investing the remainder as virtual agents for their clients, who thus become indirectly but in substance part owners of the properties in which the savings banks make their investments.

Savings banks differ from investment banks because they actually buy and hold securities

for their own account, and not for sale to their customers. Their acceptance of depositors' funds carries with it an assurance to the depositor that he can get them back. In other words, the savings bank virtually guarantees to the depositor the safety of the investments into which his money goes. This explains why the rates paid on deposits by such banks are less than the rates paid to these banks by the corporations and municipalities whose securities they own.

Insurance Companies

Insurance companies also perform the functions of financial middlemen. They obtain most of their financial resources from the payment of premiums by their policy-holders, and the funds so obtained are invested in such securities as farm mortgages, state and municipal bonds, railroad bonds, and the like. Insurance companies are naturally interested in securities of the highest grade of safety and are among the largest purchasers of such securities.

Thus thirty-seven of the leading life insurance companies of the United States held securities amounting to $3,269,161,681 in the year 1920. The money raised from policyholders and invested in these securities really went to build roads, erect public schools, municipal buildings, and the like, so that the

numberless owners of insurance policies were contributing to supply the services which they and others were obtaining from the use of such roads and other kinds of equipment.

V

The Stock Exchange

The financial institutions already discussed facilitate production by linking together the capitalists who save investment funds and the enterprisers who actually invest them in productive forms. The stock exchange is another important financial institution that performs allied economic functions but does so in a rather different way. Just what these functions are and how they are performed can be best understood after some preliminary description of the mechanism of the stock exchange.

Economic Principles Involved

Our description of some of the practices of the exchange should not be taken to mean that the widespread misunderstanding of the institution is based on ignorance of these practices. The fact is that many men who know all about these practices fail to appreciate the economic principles which underlie

the institution and which justify its existence. Our present purpose, therefore, is not to give a complete description of any particular stock exchange, but merely to describe some of the main features in order to expose the economic principles involved.

A stock exchange is essentially an association of brokers, usually an unincorporated association, whose members afford special facilities for buying and selling to those who wish to trade in securities. The term "exchange" really means the association itself, although it is also commonly applied to the building in which the association is housed and in which offers and bids are matched.

How Transactions are Made

The leading exchange in the United States is the New York Stock Exchange. Each broker who belongs to it has a representative on the floor of the exchange, who represents both him and his customers. Between the actual buyer and the actual seller of a security there always intervene two brokers—one who buys for the buyer, and another who sells for the seller. Each broker gets a commission.

The market price of stocks and bonds is established on the exchange by the competitive bidding of buyers and sellers. Purchasers of securities who expect to profit by selling them again are speculators. Buyers who in-

tend to keep their securities for the sake of the interest or dividends are investors. We shall first examine some features of stock exchange speculation, because the bulk of the transactions are of a speculative character. Two of these features are "trading on margin" and "short selling."

Trading on Margin

The nature of trading on margin can be best made clear by an example. An individual trader with $1,000 in his possession would be able to buy ten shares of stock at $100 per share. If the price rose to $105, his profits on the sale would be $50. If, however, the same trader borrowed $9,000 and added this to the sum already available for his purchases he would be able to buy one hundred shares at $100 each. With a rise of $5 per share, or five "points" as it is technically termed, would come the possibility of a gross profit of $500. These greater profit possibilities strongly impel men to trade on borrowed money. In the case cited, the $1,000 belonging to the trader is known as "margin."

Although the practices of the most reputable houses usually require a larger margin, a great many speculators work on a ten-point margin, i. e., $10 per share. It is to be seen that if the price of the stock were to drop five points, and the trader sold, he would lose

at least \$500. Margin trading increases the possibilities of both gain and loss, and especially of loss, as we shall observe presently.

One way of speculating is to buy first and sell afterwards, but another is that of selling first and buying afterwards. The first part of this latter operation is known as "short selling," and the second part is known as "covering by shorts." Such operations have an important influence on the market price of securities and one which is very widely misunderstood.

Short Selling

A short seller is one who, believing that the price of a given security is too high and will decline, sells stock that he does not own, but yet is able to deliver to the purchaser by borrowing through his broker. To make clear just what short selling means, we may suppose that a speculator anticipates a decline in the price of American Sugar Refining Company common stock, and accordingly orders his broker to sell one hundred shares. The customer places \$1,500 in the hands of his broker as protection against a *rise* in price, and the broker sells the one hundred shares at 90 for \$9,000. The proceeds of the sale the broker turns over to another broker, from whom he borrows the stock. This amounts to giving cash as security for the stock bor-

rowed, and if the price of the stock goes up, the borrowing broker must turn over correspondingly more money to the lender as security. Hence the "margin" that the customer is required to put up with his broker. Equity makes it imperative that the short seller protect his broker against an *advance* in price.

Profits and Losses

Let us suppose that the price of American Sugar Refining (common) drops from 90 to 70—as it did in the summer of 1921—and that the short seller orders his broker to cover—that is, to buy stocks to be returned to the broker from whom such stocks have been borrowed. In that event the short seller's profit would be $20 per share, less $30 commission, and a small amount as a tax, or approximately $1,965.

If, on the other hand, the price of the stock had advanced from 90 to 110 and the short seller, owing to exhaustion of margin or other cause, covered at the higher price, his loss would have been $20 per share *plus* $30 commission and a small tax, or approximately $2,035.

What has just been said contains one important implication. The possibilities of loss in short trading are not definitely limited as they are in trading for a rise. The buyer of one hundred shares of Canadian Pacific at

110, for example, is assured that he cannot lose more than the cost of the stock, no matter how low the price may go. The short seller, on the contrary, has no such limitation on his losses, for the height to which the price may possibly go has no definite limit.

Bulls and Bears

The short seller of stock, like the short seller of cotton or grain, as explained in the study on "Marketing," is known as a "short" or "bear," while the man who trades for a rise in the market is similarly known as a "bull."

In the stock market, as in the produce exchanges, the bear tends to hold the bull in check. Short selling has the effect, for the time being, of increasing the supply of stocks and of reducing prices or holding them in check; in other words, when the market tends to run away, the bear calls a halt. Later, when a decline may have occurred, he comes into the market to buy, causing prices to be firmer than otherwise.

This stabilizing influence of short selling could not exist but for the representative character of securities. One share of Pennsylvania Railroad stock, for instance, is identical with all — they are interchangeable. Short selling in land is impracticable because

of the lack of this representative character of land. Land booms reach such dizzy heights because the short seller's influence is lacking.

Criticisms of Short Selling

Much criticism has been levelled against the short seller on the ground that he creates an artificial supply and depresses the price of securities unnaturally. Such criticism needs to be considered in the light of two facts.

The first of these considerations is that for every share of stock the short sells, he must later buy one. The price depression resulting from such a transaction is therefore temporary, being confined to the life of the sale and cancelled when the purchase is made.

The fact cannot be escaped, however, that over a period of time, short selling does depress the *average* price of securities below the level that would otherwise obtain. This is because there are always some uncovered short transactions outstanding for one security or another, and because there is probably seldom a time when any given security has not been sold short to some extent.

Facts Viewed Too Radiantly

The second consideration that must be borne in mind in any effort to weigh the merits and demerits of short selling, is that the average man usually sees financial facts,

like most other facts, in too radiant a light. Future developments tend to be magnified on the favorable side. Contractors agree to construct buildings and works in less time than is requisite. Authors promise manuscripts at a time too early for completion. Business men borrow at banks and must have their notes renewed. To the extent that our optimism is inconsistent with actualities in speculative and investment circles, a repressive influence, like that of short selling, is salutary and desirable.

In the numerous forward and backward movements of stock exchange prices, some speculators on both sides win, but most lose. It is the testimony of broker after broker that the number who leave the market in actual possession of a net profit is strikingly small. One broker's estimate is that 1 per cent are successful; another's, one-tenth of 1 per cent. It would seem at first that the losers and winners would be about even; at any rate, that the chances of loss and gain for an individual trader would be equal. How then can the great preponderance of losers be explained?

Why Do Speculators Lose?

They lose for three principal reasons: the cost of operation, the pinching power of narrow margins, and financial ignorance.

The costs of operation include, to begin with, broker's commissions, taxes, and interest on borrowed money. Each of these items seems insignificant, but the aggregate frequently assumes large proportions. It seems safe to say that the customer typically pays, in the end, about 20 cents for the buying and the same for the selling of every share that his broker handles for his account. This sum would include the cost of postage, telephone, and telegraph service, but would scarcely allow for the customer's time consumed in following the course of the market and in deciding what step to take next.

If this estimate is correct, it is plain that the man who is trading for a turn of one point either way, would make a profit of 60 cents per share if the market moved a point in his direction, and would lose $1.40 per share if it moved in the opposite direction. Commissions and taxes count less heavily against the "long swing" trader, yet even for him the loss on these items cuts into the profits.

Other Reasons for Loss

Costs of operation, or losses akin to them, are sometimes swelled by three other factors. These are, first, failure of a dishonest broker to report transactions, which enables him to keep the profit himself; second, reporting purchases at prices higher than the broker actu-

ally pays, and sales at prices lower than he actually gets, which enables him to keep part of the profit himself; and third, the occasional financial failure or insolvency of the brokerage house to which the speculator has entrusted his funds. Brokerage house failures are relatively more numerous than bank failures—and are probably attended by a higher percentage of losses.

Narrow Margins

The pinching power of narrow margins is the second reason why the representative speculator loses in the end.

The typical speculator buys when prices are going up. If prices continue to rise, he has a paper profit, which he is free to realize by selling, yet why, he asks, should he sell as long as prices are rising?

But suddenly prices turn downward. There have been fluctuations before, the customer reasons, and so he holds for a favorable turn. If the drop continues, he continues to hold on more or less hopefully, but paper losses begin to appear and to eat into his margin. The broker calls upon him for additional cash to restore his margin; he may not have this cash, and then he cannot avoid selling and taking his loss. The customer was *free* to *sell* when prices rose; unless he can maintain his margin he is not free to *hold* his stocks through a

severe decline in anticipation of another rise. The typical speculator loses, therefore, because his hand is often forced by the narrowness of his margin.

The Ignorance of Speculators

Financial ignorance is a third explanation of much speculative loss, if not of most of it. This ignorance is of two kinds: ignorance as to the condition of a particular business enterprise, and ignorance of factors affecting the market as a whole.

Inside information on matters touching railroads has ceased to be an important matter. The full publicity required by the Interstate Commerce Commission has robbed the Jim Fiskes and the Jay Goulds of their one-time advantage. In the industrials inside information still confers great speculative advantage on its possessor. The dramatic rise of Bethlehem steel in 1915, and of Crucible steel in 1917, illustrates the colossal advantage that inside information holds on its side. If in any speculative arena one group has light and vision and the other has neither, the outcome can be easily foretold.

Not only is the typical speculator handicapped by having meagre information relative to special enterprises but he also has neither time nor facilities for acquiring power to interpret the general economic and finan-

cial situation. Forecasting "services" are of help to him, but these "services" frequently differ in their interpretations and recommendations, just as different brokers and speculators do. The speculator must have a mind of his own and must use it. And only speculation that rests on an exhaustive knowledge of the numerous factors affecting security prices can be counted on to yield profits in the long run. Without such knowledge to give him a solid sense of conviction and a high degree of independence of judgment, the unskilled trader is more than likely to blunder into buying "at the top" just because almost everybody else seems optimistic, or into selling "at the bottom" just because almost everybody else seems pessimistic.

The Social Advantages of Speculation

Some speculation is quite illegitimate, but organized speculation as such is altogether justifiable because of the services which it renders to society. The justification rests on two grounds: first, the encouragement which it indirectly affords to saving and investment, and second, the directive influence which it exercises on industry.

Organized speculation encourages saving and investment because it affords an open and active market for securities. Many capitalists

invest their fresh savings in the purchase of listed securities and the ease with which this can be done is both a reason for saving and a reason for investing savings. Such capitalists may, of course, merely buy securities formerly held by some one else, so that industry as a whole is not expanded unless the seller invests his proceeds in new issues, as is often done.

An open and active market registers daily, if not hourly, values of listed securities, which is of special advantage to persons who wish to use such securities as collateral for loans. Lenders, including banks, can lend maximum amounts on listed collateral because they know its salable value. Productive enterprise is thus encouraged. That the proceeds of such loans are sometimes used wholly for speculative purposes is a phase of the matter which we can best consider later in connection with our discussion of banking.

A Directive Influence

The second circumstance justifying organized and intelligent speculation is its directive influence on industry. It helps to establish for every security the right market price. The movement of stock exchange prices, therefore, like the hands of an indicator, points to the industries that are most profitable and promising. If our needs in copper, or steel, or asphalt, or telephone facilities are

inadequate, that fact tends to be expressed through profits actual and potential, and to be reflected in the prices of those securities on the exchange. Higher prices are a signal for heavier investment, and new capital moves toward the more productive points. A decline in the price of the securities of an industry as a whole, on the contrary, signifies a plethora of productive facilities there, as was instanced in the automobile industry in 1920. Organized speculation, as such, has its chief justification in its directive influence on the flow of capital.

The Criticism of Speculation

Criticism of organized speculation and of the stock exchange has, in the main, been directed along three lines. These are, first, that there is manipulation of prices; second, that social and economic waste results; and, third, that economic morale is undermined. We shall examine these in order.

Price Manipulation

Price manipulation results where methods are used to lift or depress prices to artificial levels. Success depends on the eventual participation of deluded outsiders.

The spreading of false rumors and the distribution of misleading tips is one method of effecting manipulation.

Another method is by means of "wash sales," where, through a collusion of brokers, sales and purchases are made in form only. The price at which the "sale" is made goes on the board and is carried by the ticker, yet this "price" registers the real opinion of nobody. Its effect is to mislead the uninitiated, who may buy or sell at sight of it.

Matched Orders

Matched orders represent a third method of manipulation. Orders are matched when an operator at the same time gives orders to buy and orders to sell to different brokers, creating a fictitious activity.

A form of manipulation may be accomplished on the very floor of the exchange when one broker, looking over the shoulders of others, perceives that a given stock, say Union Pacific, is in an easily manipulated position. It may be seen, for example, that while the last transaction in the stock was at 120, there are few orders to buy between 120 and 115, and one or two selling orders—"stop loss" orders—at 117. The observing broker may sell—short or otherwise—a few hundred shares, depressing the price to 117, and get several thousand shares at that price. The price snaps back to 120, and the buyer of the few thousand shares that were secured at a "stop loss" price later disposes of them.

Manipulation of security prices can be prevented to some extent by the rules and regulations laid down by the stock exchange itself. Such rules, however, cannot suffice to eliminate the practice, partly because the methods employed are difficult to detect and prove, but chiefly because deliberate manufacture of sentiment, whether bullish or bearish, is virtually impossible to distinguish from the legitimate creation of sentiment. The best preventives consist of the spread of financial knowledge and the development of a higher ethical sense, not only on the part of professional operators, but also on the part of the speculative public. If the latter were unwilling to be tempted by the possible profits of manipulations and were also competent judges of real financial values, the former would have no material to work on.

Falsifying the Indicator

Price manipulation perverts the prime function of the exchange, because it "falsifies the indicator" and thus prevents security prices from registering the true state of industrial affairs. Under such circumstances these prices cannot properly exercise that directive influence on industry to which we have already called attention. The daily reports of the New York Stock Exchange are commonly regarded as an indication of the gen-

eral business situation. What are such reports worth if they do not tell the truth?

A second criticism levelled against organized speculation as now carried on is that it results in *economic waste*. This is a social waste arising primarily from "the waste of much brains and energy on unproductive doings," as Professor Taussig says. He instances especially a part of "the labor of the brokers and their understrappers," — that part used in serving customers who are ignorant dabblers, with no solid basis for judging the values involved or for helping establish what we have called the right market price. The time spent by these speculators in watching their trades is also socially wasted; it serves nobody, not even themselves. Along with the effort spent in manipulation it constitutes the "illegitimate" speculation to which discussions of speculation so often refer.

One method of reducing this waste that has been suggested is that heavier margin requirements be imposed on speculators. The Hughes Commission of 1909 recommended the requirement of a 20 per cent margin, one that is already common among the most reputable firms. This would be none too adequate, but would prevent a large share of the "shoe-string" trading that now serves little purpose. The requirement of adequate margin as a prerequisite to trading is not imprac-

ticable from the standpoint of any of our exchanges. What is done without apparent effort on the London and Continental exchanges can be done without hardship on this side of the Atlantic.

Economic Morale Undermined

A third criticism of organized speculation as it is now conducted is that it undermines economic morale. This is a very insidious evil. It means the perversion of character which results from the idea of "getting rich quick" by the use of one's wits, instead of getting ahead more slowly by the practice of constructive virtues like industry and thrift. As long as the public sees instances of lucky speculation, it will be tempted to emulate them. The response to this temptation not only leads hundreds of men to idle away their time in watching "the ticker," studying "the board," and poring over the speculative news in the papers, but helps to spread among the mass of people the subversive notion that financial advancement is chiefly due to luck.

Many and patent as are the evils of organized speculation, the beneficial features are nevertheless so great that if we had to choose between leaving the stock exchange as it is and doing away with it altogether, there would be only one choice to make. Its retention would be distinctly preferable, because

it affords an open and active market, the advantages of which have been specified and emphasized in earlier portions of the preceding discussion.

VI
Conclusion

The foregoing consideration of the financing of production justifies four significant conclusions.

First, both the accumulation of funds by capitalists and their investment in concrete forms by enterprisers, are indispensable to the modern process of production.

Second, all the different forms of securities issued by corporations derive their social justification from the fact that they help to put into the most capable hands both the enterpriser's function of assuming the risks of production and the capitalist's function of performing the necessary waiting. They serve a selective purpose.

Third, the same sort of selective service is rendered to the community by financial middlemen, such as investment banks, savings banks, and insurance companies. All these institutions bring specialized skill and effective organization to bear upon an essential eco-